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PATENT
JC973 U.S.P. 09/813225
03/20/01


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Joseph A. Orr et al.

Serial No.: Not Yet Assigned

Filed: March 19, 2001

For: REBREATHING METHODS
INCLUDING OSCILLATING,
SUBSTANTIALLY EQUAL REBREATHING
AND NON-REBREATHING PERIODS

Examiner: Unknown

Group Art Unit: Unknown

Attorney Docket No.: 4637US

NOTICE OF EXPRESS MAILING

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

In compliance with the duty to disclose information material to patentability pursuant to 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents are enclosed pursuant to 37 C.F.R. § 1.98(a).

In accordance with 37 C.F.R. § 1.97(g) and (h), filing of this Information Disclosure Statement is not to be construed as a representation that a search has been made or an

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admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b). Further, no representation is made by Applicants herein that no other possible material information as defined in 37 C.F.R. § 1.56 (b) exists.

DOCUMENTS

U.S. Patent Documents

<u>U.S. Patent No.</u>	<u>Issue Date</u>	<u>Inventor</u>
4,221,224	09/1980	Clark
4,363,327	12/1982	Clark
4,463,764	08/1984	Anderson et al.
4,608,995	09/1986	Linnarsson et al.
5,060, 656	10/1991	Howard
5,069,220	12/1991	Casparie et al.
5,117,674	06/1992	Howard
5,178,155	01/1993	Mault
5,285,794	02/1994	Lynch
5,299,579	04/1994	Gedeon et al.
5,402,796	04/1995	Packer et al.
5,632,281	05/1997	Rayburn
5,836,300	11/1998	Mault
5,971,934	10/1999	Scherer et al.
6,102,868	08/2000	Banner et al.

Foreign Patent Documents

<u>Document No.</u>	<u>Date</u>	<u>Country</u>
28 49 217 A1	05/1980	DE
96/24285	08/1996	PCT
WO 98/12963	04/1998	PCT

Other Documents

H. Blomquist et al., *A Non-Invasive Technique for Measurement of Lung Perfusion*, Intensive Care Medicine 1986; 12:172.

R.J. Bosman et al, *Non-Invasive Pulmonary Blood Flow Measurement by Means of CO₂ Analysis Of Expiratory Gases*, Intensive Care Medicine 1991, 17:98-102.

A. Gedeon, *Non-Invasive Pulmonary Blood Flow for Optimal Peep*, ICOR AB, Ulvsundavagen 178 B, S-161 30 Bromma, Sweden, Pages 49-58.

Capek, J.M., *Noninvasive Measurement of Cardiac Output Using Partial CO₂ Rebreathing* [Dissertation], Rensselaer Polytechnic Institute (1988) 28:351 p. (due to large number of pages, only table of contents and abstract have been copied).

Capek, J.M., et al., *Noninvasive Measurement of Cardiac Output Using Partial CO₂ Rebreathing*, IEEE Trans. Biomed. Eng. (1988) 35(9):653-61.

Davies, Gerald G., et al., *Continuous Fick cardiac output compared to thermodilution cardiac output*, Critical Care Medicine (1986) 14(10):881-85.

Elliot, C. Gregory, et al., *Complications of Pulmonary Artery Catheterization in the Care of Critically Ill Patients*, Chest (1979) 76:647-52.

Fick, A., *Über die Messung des Blutquantums in den Herzventrikeln*, Sitzungsbericht der Physikalisch-Medizinischen Gesellschaft zu Würzburg (1870) 36 (2 pages).

Gama de Abreu, Marcelo, et al., *Measurement of Pulmonary Capillary Blood Flow for Trending Mixed Venous Oxygen Saturation and Oxygen Delivery*, Crit. Care Med. (1998), Vol. 26, No. 1 (Suppl.), A106, Abstract #238, (1 page).

Gama de Abreu, Marcelo, et al., *Is the Partial CO₂ Rebreathing Technique a Useful Tool for Trending Pulmonary Capillary Blood Flow During Adjustments of Peep?*, Crit. Care Med. (1998), Vol. 26, No. 1 (Suppl.), A106, Abstract #237, (1 page).

Gama de Abreu, et al., *Partial carbon dioxide rebreathing: A reliable technique for noninvasive measurement of nonshunted pulmonary capillary blood flow*, Crit. Care Med. (1997) 25(4):675-83.

Gedeon, A., et al., *Noninvasive Cardiac Output Determined with a New Method Based on Gas Exchange Measurements and Carbon Dioxide Rebreathing: A Study in Animals/Pigs*, J. Clin. Monit. (1992) 8(4):267-78.

- Gedeon, A., et al., *A new method for noninvasive bedside determination of pulmonary blood flow*, Med. & Biol. Eng. & Comput. (1980) 18:411-418.
- Guyton, A.E., et al., *Measurement of cardiac output by the direct Fick method*, In: *Cardiac output and its regulation*, W.B. Saunders Company (1973) 21-39.
- Kyoku, I., et al. *Measurement of cardiac output by Fick method using CO₂ analyzer Servo, Kyobu Geka*. Japanese Journal of Thoracic Surgery (1988) 41(12):966-70.
- Lynch, J., et al., *Comparison of a modified Fick method with thermodilution for determining cardiac output in critically ill patients on mechanical ventilation*, Intensive Care Med. (1990) 16:248-51.
- Mahutte, C. Kees, et al., *Relationship of Thermodilution Cardiac Output to Metabolic Measurements and Mixed Venous Oxygen Saturation*, Chest (1993) 104(4):1236-42.
- Miller, D.M., et al., *A Simple Method for the Continuous Noninvasive Estimate of Cardiac Output Using the Maxima Breathing System. A Pilot Study*, Anaesth. Intens. Care (1997) 25(1):23-28.
- Österlund, B., et al., *A new method of using gas exchange measurements for the noninvasive determination of cardiac output: clinical experiences in adults following cardiac surgery*, Acta Anaesthesiol Scand (1995) 39:727-32.
- Sackner, Marvin A., *Measurement of cardiac output by alveolar gas exchange*, Handbook of Physiology ~ The Respiratory System IV, Chapter 13, 233-55.
- Spalding, H. K., et al., *Carbon Dioxide (CO₂) Elimination Rate Accurately Predicts Cardiac Output*, Anesthesiology (1997) 87(3A) (1 page).
- Sprung, Charles L., et al., *Ventricular Arrhythmias During Swan-Ganz Catheterization of the Critically Ill*, Chest (1981) 79:413-15.
- Taskar, V., et al., *Dynamics of Carbon Dioxide Elimination Following Ventilator Resetting*, Chest (1995) 108:196-202.
- Winkler, Tilo, et al., *Pulmonary Capillary Blood Flow by Partial CO₂ Rebreathing: A Simulation Study Using a Bicompartmental Model of Gas Exchange*, Crit. Care Med. (1998), Vol. 26, No. 1 (Suppl.), A105, Abstract #234, (1 page).
- Roy, Rob J., et al., *Noninvasive Differential Blood Flow Monitoring During One-Lung Anesthesia*, IEEE Engineering in Medicine & Biology Soc. 11th Annual Internat'l. Conference-1413 (1989) (2 pages).
- Gama de Abreu, M., et al., *Reliability of the Partial CO₂ Rebreathing Technique for Measurement of Cardiac Output*, Proceedings RC IEEE-EMBS & 14th BMESI (1995), pp. 4.15-4.16.

Attorney Docket: 4637US

Jaffe, Michael B., *Partial CO₂ Rebreathing Cardiac Output-Operating Principles of the NICO™ System*, Jour. of Clinical Monitoring & Computing (1999), Vol. 15, pp. 387-401.

Applicants offer to supply any explanation or discussion of the documents which the Examiner feels is necessary or desirable and which is requested.

This Information Disclosure Statement is filed within three (3) months of the filing date of the above-identified application.

Respectfully submitted,



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Date: March 19, 2001

BGP/ps:dlm

Enclosures: Form PTO-1449

Copy of documents cited

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 1,455.00)

Complete if Known

Application Number	Not Yet Assigned	PRO
Filing Date	March 20, 2001	
First Named Inventor	Joseph A. Orr	
Examiner Name	Unknown	
Group Art Unit	Unknown	
Attorney Docket No.	4637US	



METHOD OF PAYMENT

1. The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number **20-1469**

Deposit Account Name **TraskBritt**

Charge Any Additional Fee Required
Under 37 CFR 1.16 and 1.17

Applicant claims small entity status.
See 37 CFR 1.27

2. Payment Enclosed:

Check Credit card Money Order Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid	
101	710	201	355 Utility filing fee	355
106	320	206	160 Design filing fee	0
107	490	207	245 Plant filing fee	0
108	710	208	355 Reissue filing fee	0
114	150	214	75 Provisional filing fee	0

SUBTOTAL (1) (\$ 355.00)

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
120	-20** =	100 X 9 =	900
8	- 3** =	5 X 40 =	200
			0 = 0

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103	18	203 9 Claims in excess of 20
102	80	202 40 Independent claims in excess of 3
104	270	204 135 Multiple dependent claim, if not paid
109	80	209 40 ** Reissue independent claims over original patent
110	18	210 9 ** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 1,100.00)

**or number previously paid, if greater; For Reissues, see above

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105	130	205 65 Surcharge - late filing fee or oath	
127	50	227 25 Surcharge - late provisional filing fee or cover sheet	
139	130	139 130 Non-English specification	
147	2,520	147 2,520 For filing a request for ex parte reexamination	
112	920*	112 920* Requesting publication of SIR prior to Examiner action	
113	1,840*	113 1,840* Requesting publication of SIR after Examiner action	
115	110	215 55 Extension for reply within first month	
116	390	216 195 Extension for reply within second month	
117	890	217 445 Extension for reply within third month	
118	1,390	218 695 Extension for reply within fourth month	
128	1,890	228 945 Extension for reply within fifth month	
119	310	219 155 Notice of Appeal	
120	310	220 155 Filing a brief in support of an appeal	
121	270	221 135 Request for oral hearing	
138	1,510	138 1,510 Petition to institute a public use proceeding	
140	110	240 55 Petition to revive - unavoidable	
141	1,240	241 620 Petition to revive - unintentional	
142	1,240	242 620 Utility issue fee (or reissue)	
143	440	243 220 Design issue fee	
144	600	244 300 Plant issue fee	
122	130	122 130 Petitions to the Commissioner	
123	50	123 50 Processing fee under 37 CFR 1.17(q)	
126	180	126 180 Submission of Information Disclosure Stmt	
581	40	581 40 Recording each patent assignment per property (times number of properties)	40
146	710	246 355 Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249 355 For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279 355 Request for Continued Examination (RCE)	
169	900	169 900 Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$ 40.00)

SUBMITTED BY

Name (Print/Type)	Brick G. Power	Registration No. (Attorney/Agent)	38,581	Telephone	(801) 532-1922
Signature	<i>Brick G. Power</i>			Date	03/20/2001

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